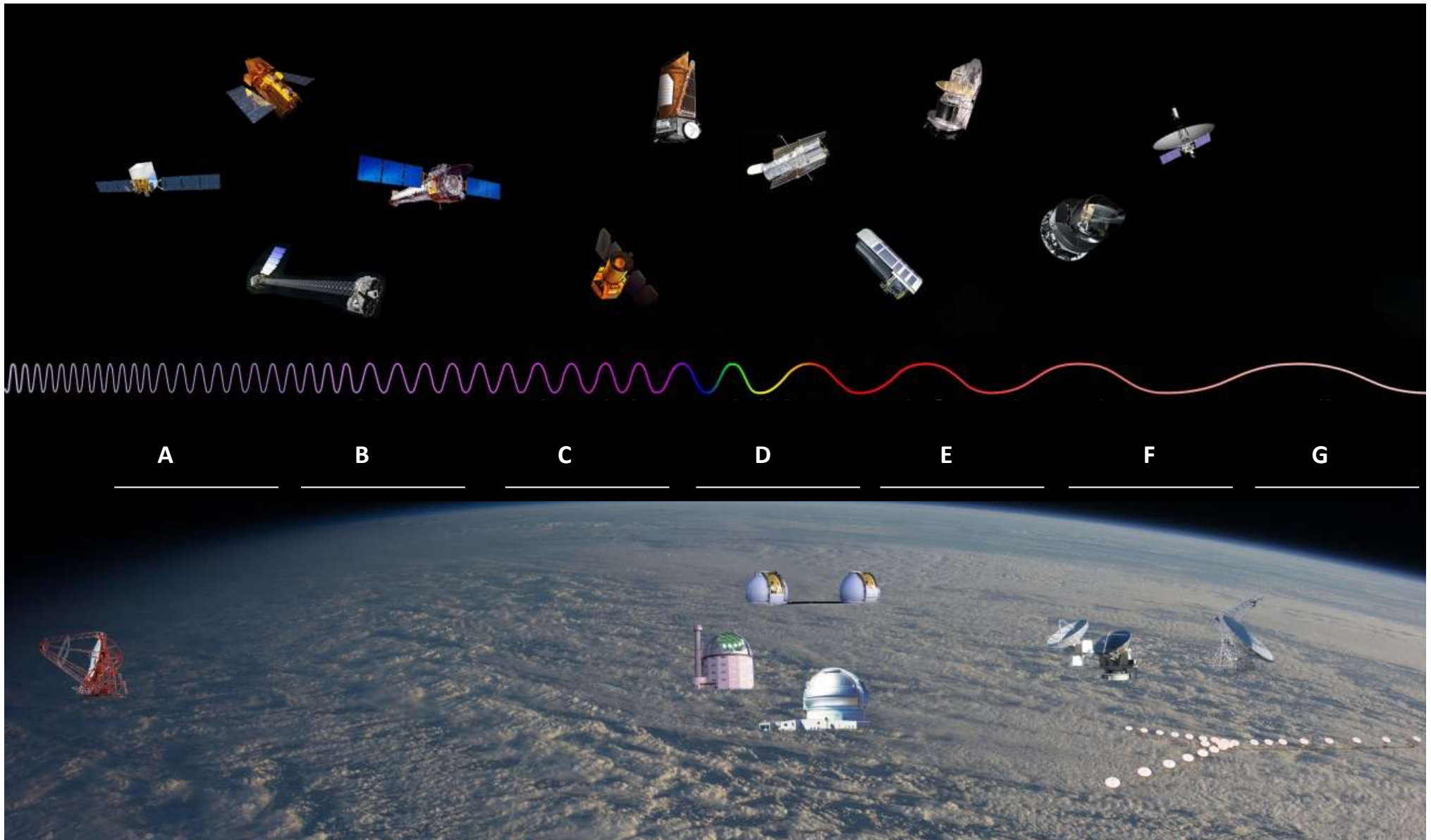


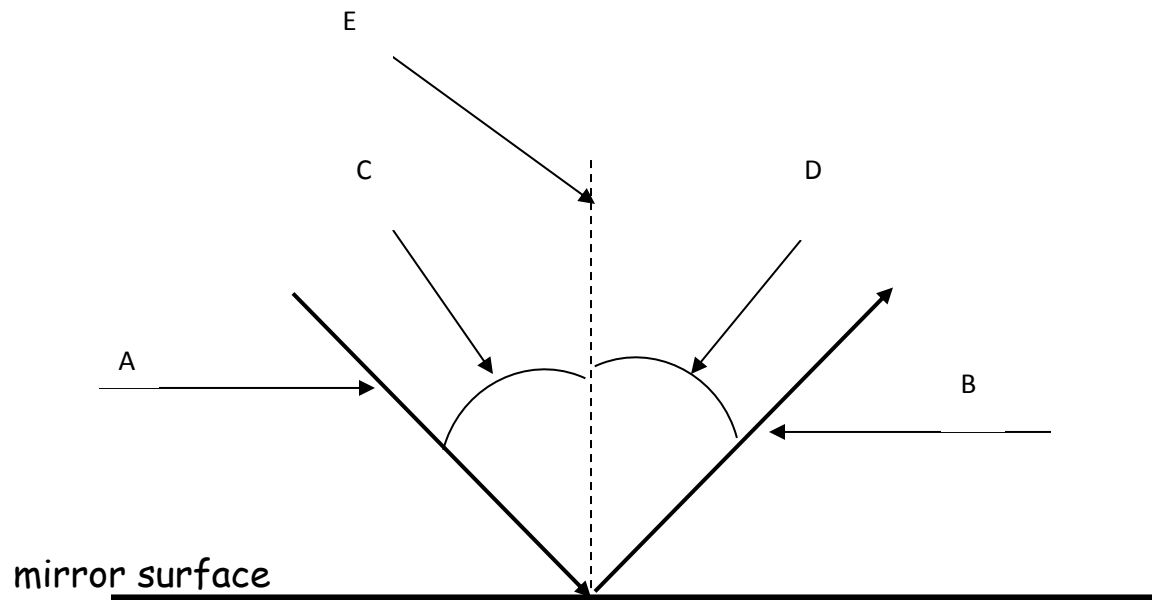
## Station 1

1. Listen to [tone A](#). This is a mix of a 440Hz tone and a 441Hz tone. What causes the beat in the tone to develop?
  - a. Constructive interference
  - b. Destructive interference
  - c. Bernoulli interference
  - d. Pitch change
  
2. Listen to tones [B](#) and [C](#). Which one has a higher frequency?
  - a. Tone B
  - b. Tone C
  - c. Neither
  
3. Listen to the tones again. Which has a longer wavelength?
  - a. Tone B
  - b. Tone C
  - c. Neither

d. Station 2. Identify each type of radiation



### Station 3



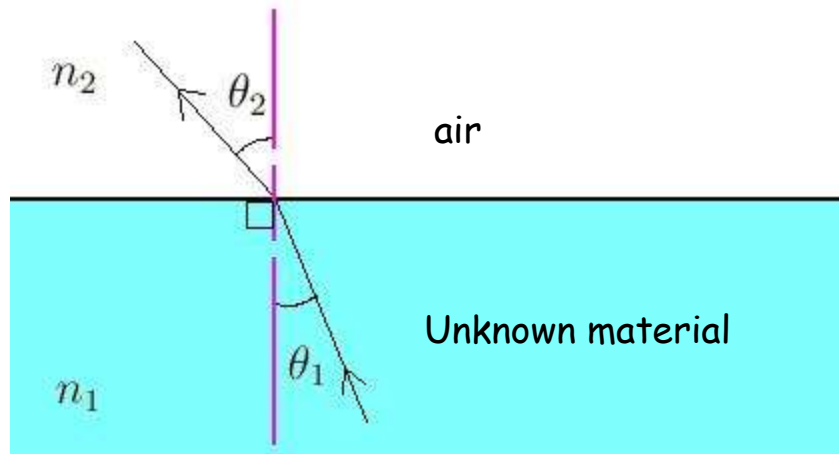
Sunlight is streaming in through the window. It bounces off a mirror laying on the floor.

Label each part of the diagram.

#### Station 4

$$\text{Snell's Law:}$$
$$n_1 \sin \theta_1 = n_2 \sin \theta_2$$

Given Snell's Law, above, where  $n$  is the index of refraction of a given material and  $\theta$  is the angle of incidence, determine the index of refraction of the unknown material to the nearest hundredth.



In the lab, Mrs. Brown observes a laser line passing through an unknown material towards a boundary with air with an angle of incidence of  $24.5^\circ$ . The light ray emerges into the air with an angle of refraction of  $33.8^\circ$ .

Station 5: Determine the color of filter for each photo indicated.



No Filter



**A**



**B**

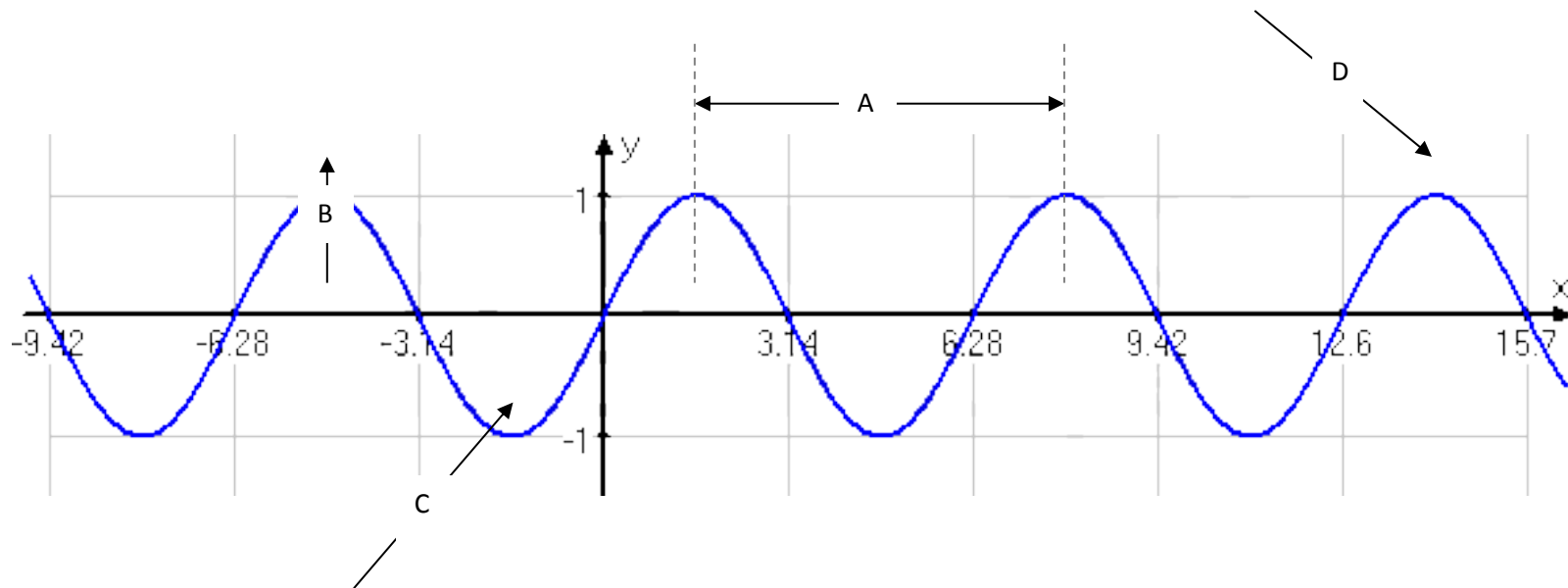


**C**



**D**

Station 6: Label the parts of the wave form shown.



E. If the x axis is in m, what is the wavelength (to the nearest **hundredth**)?

F. What is the frequency (to the nearest **hundredth**) in a MegaHertz?